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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/579,503	05/30/2000	Akihiko Noda	35.C14516	2366

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EXAMINER

FOSTER, JUSTIN B

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 01/02/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/579,503

Applicant(s)

NODA, AKIHIKO

Examiner

Justin Foster

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Akiyama, *et al.*

(5,594,653). Akiyama discloses a printing method carried out in a host which can set an auto retreat of print data (Figure 5, Host computer 61) and a printing apparatus (Figure 5, Printing apparatus side) connected in bi-directional communication (RS-232C two-way, serial interface, column 8, line 34) with the host, wherein the printing apparatus is equipped with a memory device (Figure 5, Status memory 77) and can perform a data retreat processing in response to a request from the host, comprising the steps of causing the host to start a print processing, form print data, and send the formed print data (column 7, lines 66-67); causing the host to set an auto retreat flag (“error state flag”, column 3, lines 28-30); causing the host to discriminate whether a notice has been received from the printing apparatus (inherent from “notify the host computer that the printing apparatus cannot accept anymore information”, column 9, lines 55-59); causing the host to display contents of the received notice (“The host computer can thus... post prompts or other appropriate information to the user”, column 11, lines 20-22); causing the host to discriminate whether the print processing has been completed in the printing apparatus (inherent from “printing apparatus status information”, column 10, lines 59-63).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akiyama, as applied to claim 1 above, and in further view of Kusumoto (6,351,315). With regard to claim 1, Akiyama discloses the invention as stated in claim 1. Akiyama further discloses causing the printing apparatus to discriminate whether the print data sent from the host has been received (inherent when host transmits print data, column 7, lines 66-67); causing the printing apparatus to temporarily store the received print data (column 8, lines 21-23); causing the printing apparatus to discriminate whether an inquiry has been received from the host ("printing apparatus status request", column 8, lines 56-61); causing the printing apparatus to check the received inquiry ("interprets ... the received data", column 8, lines 4-5); and causing the printing apparatus to reply to the inquiry based on a result of the checking ("sending the current printing apparatus status", column 8, lines 56-61). Akiyama does not disclose causing the printing apparatus to update a job execution management table; causing the printing apparatus to discriminate whether a retreated job exists; or causing the printing apparatus to discriminate whether a print-waiting job exists. Kusumoto teaches, in lines 61-63 of column 10, causing a printing apparatus to update a job execution management table ("information management table", column 10, line 61). It would have been obvious to one of ordinary skill in the art at the time the invention was made for the job execution management table to be updated in order to

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properly keep track of all the print jobs being sent to the printing apparatus. Kusumoto further teaches, in lines 30-36 of column 7, holding images in standby condition if a printing job is currently executing. This implies causing the printing apparatus to discriminate whether a print-waiting job exists. It would have been obvious to one of ordinary skill in the art at the time the invention was made to discriminate whether a print-waiting job exists. This would ensure orderly printing of all print jobs. Kusumoto further teaches, in lines 12-24 of column 10, transmitting print data to an external device temporarily and retrieving the data for printing when the conditions are right. This is inherently a retreated job. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the printing apparatus to discriminate whether a retreated job exists. This would ensure that all jobs are printed in a timely manner.

5. With regard to claim 3, the combination of Akiyama and Kusumoto discloses the invention as stated in claim 2. Kusumoto further discloses causing the printing apparatus to analyze print attributes of the first print data in the job execution management table (column 10, lines 54-60); causing the printing apparatus to analyze a status of the printing apparatus and discriminate whether the print data can be normally printed (column 7, lines 29-35); causing the printing apparatus to execute the print processing (column 7, lines 34-35); and causing the printing apparatus to update the job execution management table ("information management table", column 10, lines 61-63). Akiyama discloses causing the printing apparatus to discriminate whether the print processing has been completed and to delete the print data (inherent from "resume printing after deleting all previously received data", column 10, lines 5-6).

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6. With regard to claim 4, the combination of Akiyama and Kusumoto discloses the invention as stated in claim 3. Kusumoto further discloses causing the printing apparatus to discriminate whether the auto retreat flag has been set (column 15, lines 23-27); causing the printing apparatus to discriminate whether the print data can be automatically retreated referring to an auto retreat information table (inherently necessary before data can be retreated); causing the printing apparatus to suspend the print processing and retreat and hold the print data (column 10, lines 12-17); and causing the printing apparatus to update a job retreat management table (column 10, lines 61-63). It is inherent that the host would be notified that the job has been suspended in order to allow the host to correct the problem leading to the suspension (column 10, lines 16-17).

7. With regard to claim 5, the combination of Akiyama and Kusumoto discloses the invention as stated in claim 4. Akiyama further discloses causing the printing apparatus to suspend the print processing (column 9, lines 47-49); causing the printing apparatus to discriminate whether an error has been removed ("monitors the error information", column 9, line 47); and causing the printing apparatus to discriminate whether the print data has been cancelled (inherent from "requesting the status of the printing apparatus", column 8, lines 56-57). It would have been obvious to one of ordinary skill in the art at the time the invention was made to perform these steps when the auto retreat flag is not set and the print data cannot be automatically retreated since there is nowhere else to store the print data.

8. With regard to claim 6, the combination of Akiyama and Kusumoto discloses the invention as stated in claim 2. Kusumoto further discloses causing the printing apparatus to analyze the print attributes of the print data in a job retreat management table (column 10, lines

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54-60); causing the printing apparatus to discriminate whether the print data can be normally printed (inherent from “image data are held in standby condition ... if a printing job is currently executing”, column 7, lines 30-36); and causing the printing apparatus to update the job retreat management table and job execution management table (column 10, lines 61-63). Akiyama further discloses causing the printing apparatus to analyze the status of the printing apparatus (column 8, lines 56-57); and causing the printing apparatus to restore and delete the print data (column 10, lines 5-6).

9. Claims 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akiyama in view of Kusumoto. With regard to claim 8, Akiyama discloses a printing method carried out in a host which can set an auto retreat of print data (Figure 5, Host computer 61) and a printing apparatus (Figure 5, Printing apparatus side) connected in bi-directional communication (RS-232C two-way, serial interface, column 8, line 34) with the host, wherein the printing apparatus is equipped with a memory device (Figure 5, Status memory 77) and can perform a data retreat processing in response to a request from the host, comprising the steps of causing the host to send print data to the printing apparatus (column 7, lines 66-67); and causing the printing apparatus to receive the print data sent from the host (column 7, line 67 – column 8, line 3). Akiyama does not disclose causing the printing apparatus to discriminate whether the print data can be normally printed on the basis of print attributes of the received print data and a status of the printing apparatus; causing the printing apparatus to execute the printing when it is determined that the print data can be normally printed; or causing the printing apparatus to allow the print data to be retreated into the memory device in accordance with an auto retreat setting when it is determined that the print data cannot be normally printed, thereby enabling other print

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data to be printed. Kusumoto teaches, in lines 29-35 of column 7, causing the printing apparatus to discriminate whether the print data can be normally printed on the basis of print attributes of the received print data and a status of the printing apparatus; causing the printing apparatus to execute the printing when it is determined that the print data be normally printed; and causing the printing apparatus to allow the print data to be retreated into the memory device in accordance with an auto retreat setting when it is determined that the print data cannot be normally printed, thereby enabling other print data to be printed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to cause the printing apparatus to discriminate whether the print data can be normally printed on the basis of print attributes of the received print data and a status of the printing apparatus; to cause the printing apparatus to execute the printing when it is determined that the print data be normally printed; and to cause the printing apparatus to allow the print data to be retreated into the memory device in accordance with an auto retreat setting when it is determined that the print data cannot be normally printed, thereby enabling other print data to be printed. This would improve the print processing by temporarily storing print data while an error is fixed so as not to lose said print data.

10. With regard to claim 9, the combination of Akiyama and Kusumoto discloses the invention as stated in claim 8. Kusumoto further discloses, in lines 29-35 of column 7, suspending the print processing and retreating the print data when it is determined that the print data cannot be normally printed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to only suspend the print processing and not retreat the data when it is determined that the auto retreat setting does not exist since no retreat was desired by the host.

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11. With regard to claim 10, the combination of Akiyama and Kusumoto discloses the invention as stated in claim 9. IT is inherent that retreated print data is managed as a retreat job and that the retreated job exists if said print data is retreated. Kusumoto further discloses, in lines 29-35 of column 7, discriminating whether a print-waiting job exists.

12. With regard to claim 11, the combination of Akiyama and Kusumoto discloses the invention as stated in claim 10. Kusumoto further discloses causing the printing apparatus to discriminate whether the print data can be normally printed on the basis of the print attributes of the print data and the status of the print output apparatus when it is determined that the print-waiting job exists (column 7, lines 31-32), to execute the printing when it is decided that the print data can be normally printed (column 7, lines 34-35), and to allow the print data to be retreated into the memory device in accordance with the auto retreat setting when it is determined that the print data cannot be normally printed (column 7, lines 29-31).

13. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akiyama and Kusumoto, as applied to claim 4 above, and in further view of Takayanagi, *et al.* (5,619,623). The combination of Akiyama and Kusumoto discloses the invention as stated in claim 4. Akiyama further discloses causing the host to obtain information on the retreated job in the printing apparatus ("sending the current printing apparatus status to host computer", column 8, lines 57-61); and causing the host to display the obtained information ("The host computer can thus... post prompts or other appropriate information to the user", column 11, lines 20-22). The combination does not disclose causing the host to discriminate whether a change in attributes of the job has been instructed or causing the host to send the attributes to be changed to the printing apparatus. Takayanagi teaches, in lines 65 of column 2 through 2 of column 3, causing a host to

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send attributes to be changed to the printing apparatus. It is inherent that the host must first discriminate whether a change in attributes of the job has been instructed in order to know which attributes to change. It would have been obvious to one of ordinary skill in the art at the time the invention was made to cause the host to discriminate whether a change in attributes of the job has been instructed and to send the attributes to be changed to the printing apparatus. This would improve the print processing by getting the most suitable print attributes associated with a job.

14. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akiyama and Kusumoto, as applied to claim 8 above, and in further view of Takayanagi. With regard to claim 12, the combination of Akiyama and Kusumoto discloses the invention as stated in claim 8. Akiyama further discloses, wherein when the print data is retreated into the memory device, said method causes the printing apparatus to notify the host of a situation of the retreat of the print data (inherent from "sending the current printing apparatus status", column 8, lines 55-60). The combination does not disclose wherein the host can change the print attributes in accordance with the retreat situation obtained from the printing apparatus and said method causes the host to send the print attributes to the printing apparatus when the print attributes are changed. Takayanagi teaches, in lines 65 of column 2 through 2 of column 3, sending a change of print attributes to the printing apparatus. It would have been obvious to one of ordinary skill in the art at the time the invention was made wherein the host can change the print attributes in accordance with the retreat situation obtained from the printing apparatus and said method causes the host to send the print attributes to the printing apparatus when the print attributes are changed. This would provide better print processing since the most suitable print attributes could be selected for a print.

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15. With regard to claim 13, the combination of Akiyama, Kusumoto, and Takayanagi discloses the invention as stated in claim 12. Takayanagi further discloses when the print data with the print attributes changed is received from the host, said method causes the printing apparatus to execute the processing in accordance with the print attributes and the status of the print output apparatus (inherent from "including the ... attribute data changed in the changing step", column 3, lines 2-5).

16. Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neilsen (6,639,687) in view of Kusumoto in further view of Akiyama. With regard to claim 14, Neilsen discloses a computer-readable memory medium (inherent in computer system Client 4a, Figure 1, column 3, lines 4-6), which stores a program having a function for displaying print status information (figure 4). Neilsen further discloses a "Cancel Job" button (column 4, lines 37-39) for allowing a print job to be cancelled. Neilsen does not disclose a function for instructing an auto retreat of print data to a printer. Kusumoto teaches, in lines 29-35 of column 7, temporarily storing a print job in a memory unit, which is inherently an auto retreat function. Akiyama teaches, in lines 66-67 of column 7, transmitting print data as well as command data and other information together to the printing apparatus. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the program to comprise a code for allowing the user to select one of validation and invalidation of an auto retreat function on a display device; and a code for allowing the print data to be sent together with information indicating validation or invalidation of the auto retreat function selected by the user. This would improve print processing by giving the user the choice of whether or not to use the auto retreat function.

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17. With regard to claim 15, the combination of Neilsen, Kusumoto, and Akiyama discloses the invention as stated in claim 14. Neilsen further discloses, in lines 24-28 of column 4, displaying a message indicating the status of a print job. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the program to further comprise a code for allowing a message to be displayed on the display device, the message indicating that the printer has executed the auto retreat. This would let the user know the status of the print data.

18. With regard to claim 16, the combination of Neilsen, Kusumoto, and Akiyama discloses the invention as stated in claim 14. Neilsen further discloses, in lines 24-28 of column 4, displaying a message indicating the status of a print job. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the program to further comprise a code for allowing a message to be displayed on the display device, the message indicating that the printer has printed print data not automatically retreated. This would let the user know the status of the print data.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Foster whose telephone number is (703)305-1900. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on (703)308-7452. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

JF

A handwritten signature in black ink, appearing to read "David Moore", with a stylized, flowing script.

**DAVID MOORE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**